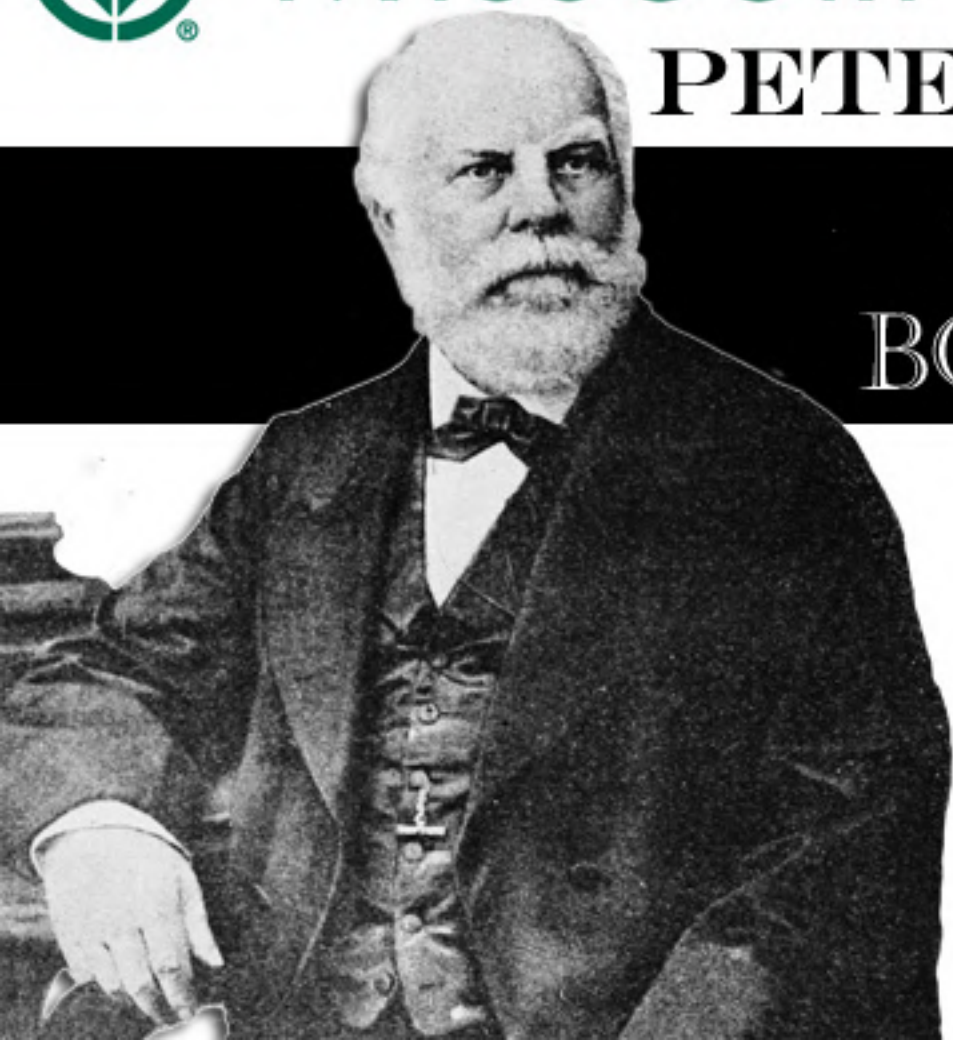


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GEORGE ENGELMANN
BOTANICAL NOTEBOOKS



Pagination Note:

Since many of the items lack a specific page number, the page number displayed online refers to the sequentially created number each item was given upon cataloging the materials.

Oct 1861

1-3 unripe
green fruit
purple fruit, part of
purple fruit, part of
5 on edge
10

10 on H.
6 at or
margin
16 on H.

8
5
13

8 on H.
5 at or
margin
13

No 18 Quant. glaucophylla

Oct 1861



0 1 2 3 4 5 6 7 8 9 10

cm

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MISSOURI
BOTANICAL
GARDEN

2930

M. W. ALEXANDER,

SOUTH-EAST CORNER OF FOURTH AND MARKET STREETS, ST. LOUIS, MISSOURI

ST. LOUISE ENGELMANN PAPERS

most fruits unripe, green, some short
plump, others elongated, angular (No 1)
branch like with fewer and less developed
seeds. —

seeds of all these very glutinous,
making a large quantity of water very
mucilaginous, orropy — cells figured ^{other paper} of

fruit No 4 was the only one on the
same plant which was ripe; deep purple
with deep purple pulp. — not at all
glutinous, but sweetish insipid
cells like those of *O. Pycnanthus*
and flesh also the same, with crystals.



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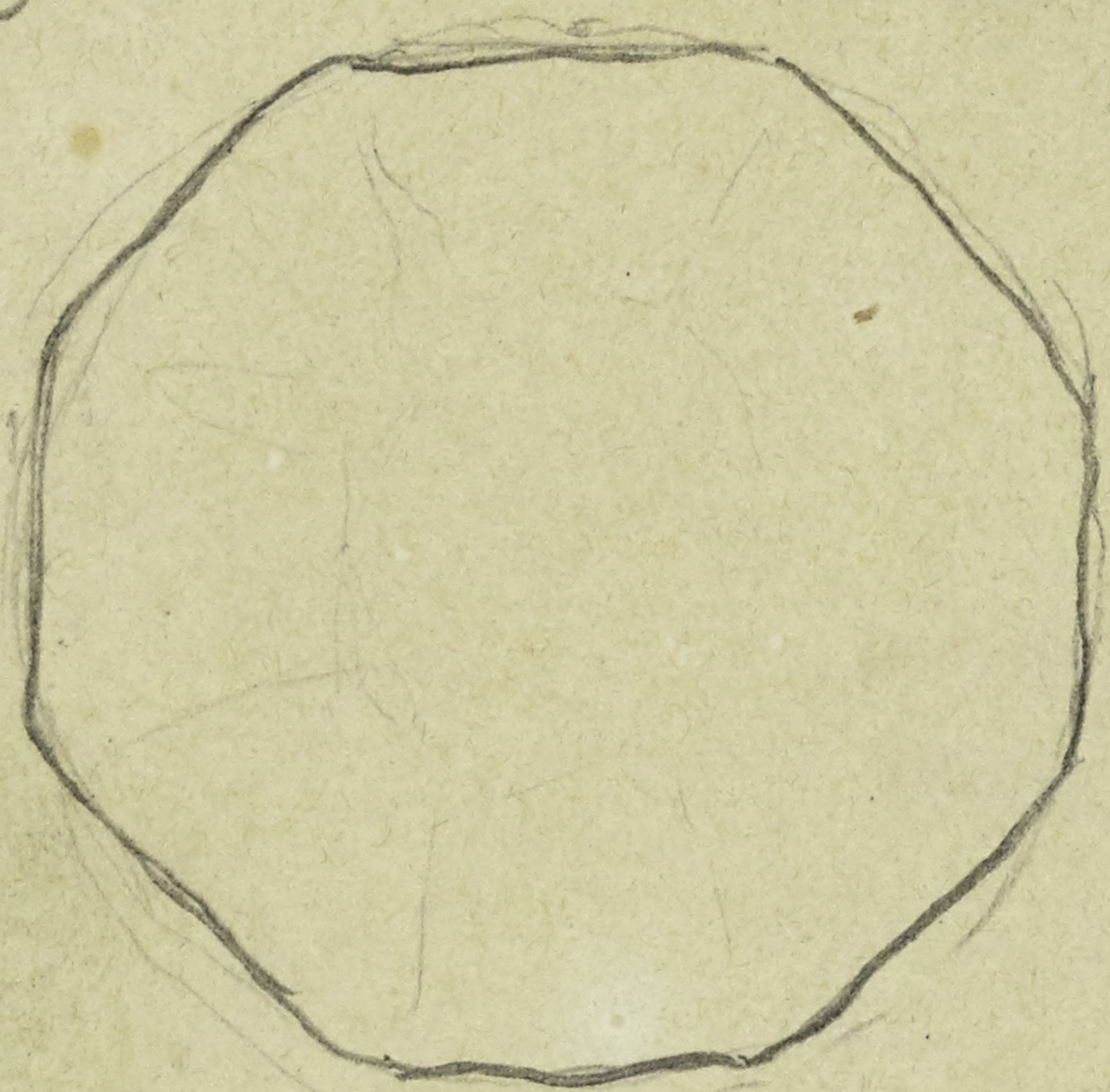
MISSOURI
BOTANICAL
GARDEN

Quintia glaucophylla

July 20 1862

H. B. Minn.

x280

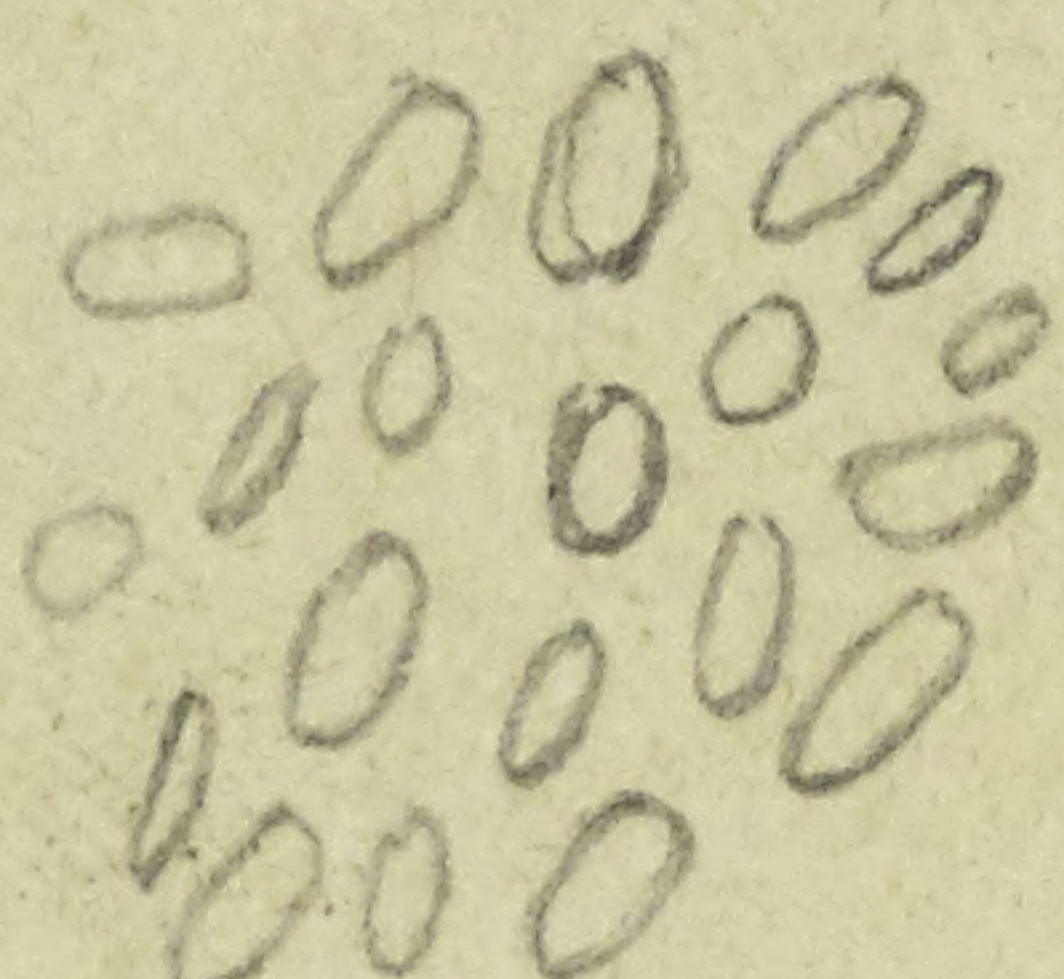


dry pollen from fresh
anthers



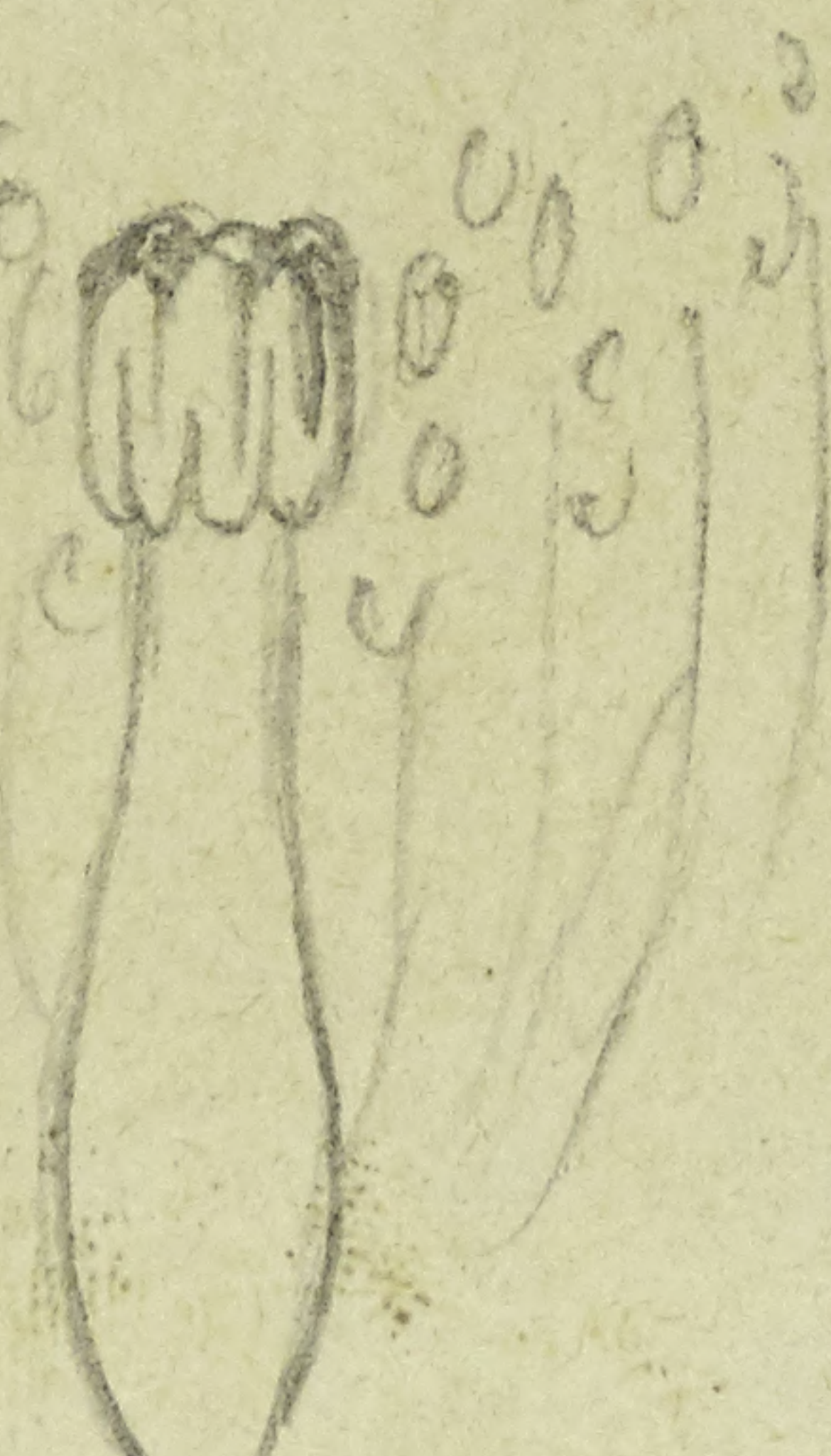
fl. $2\frac{1}{2}$ - $3\frac{3}{4}$ inches diam.
8 sepals 8 petals 3-4 internod.

open later in evening than
others



ovilla x780

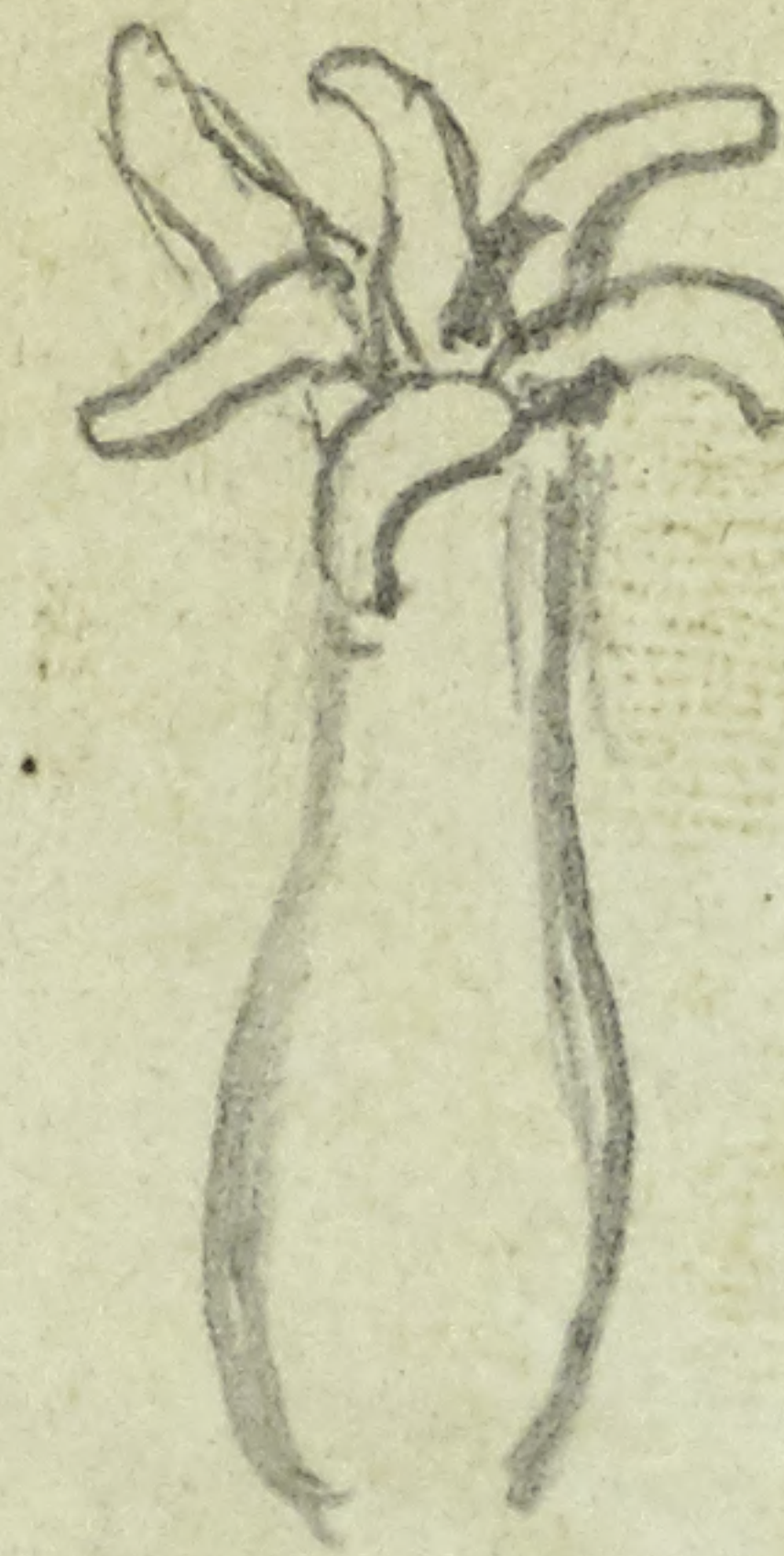
stigma
erect
obtus



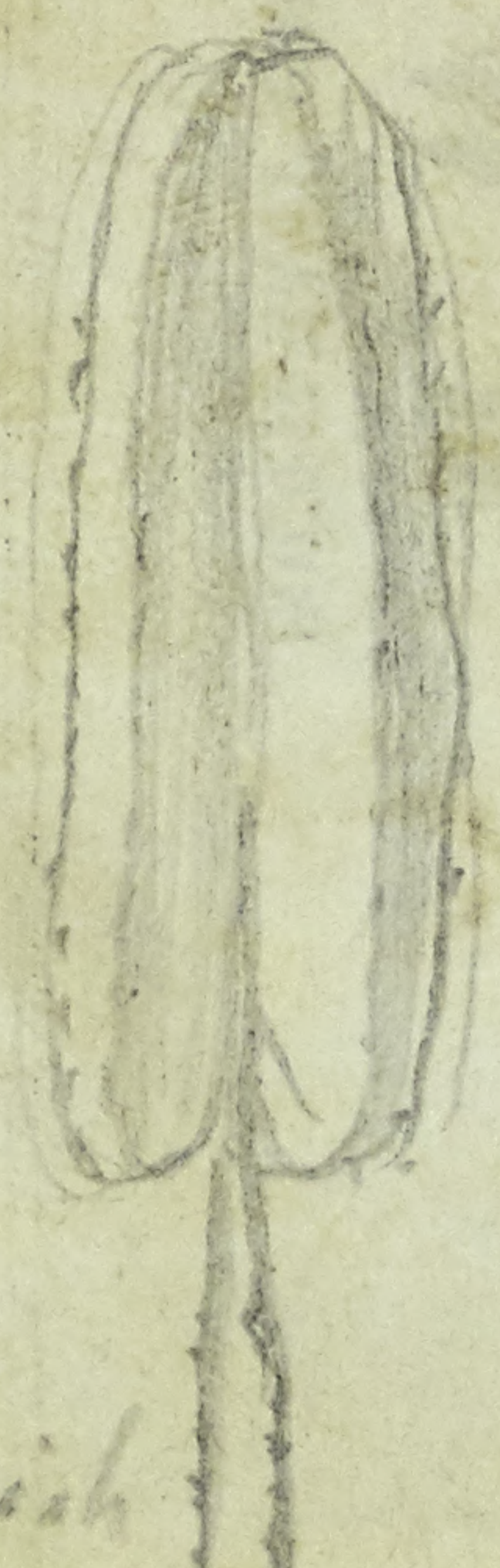
style white



x30



stigma at last
spread; yellowish



x10

fla



0 1 2 3 4 5 6 7 8 9 10

cm

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GARDEN

Opuntia glaucophylla

Sept 4 1862

x 10



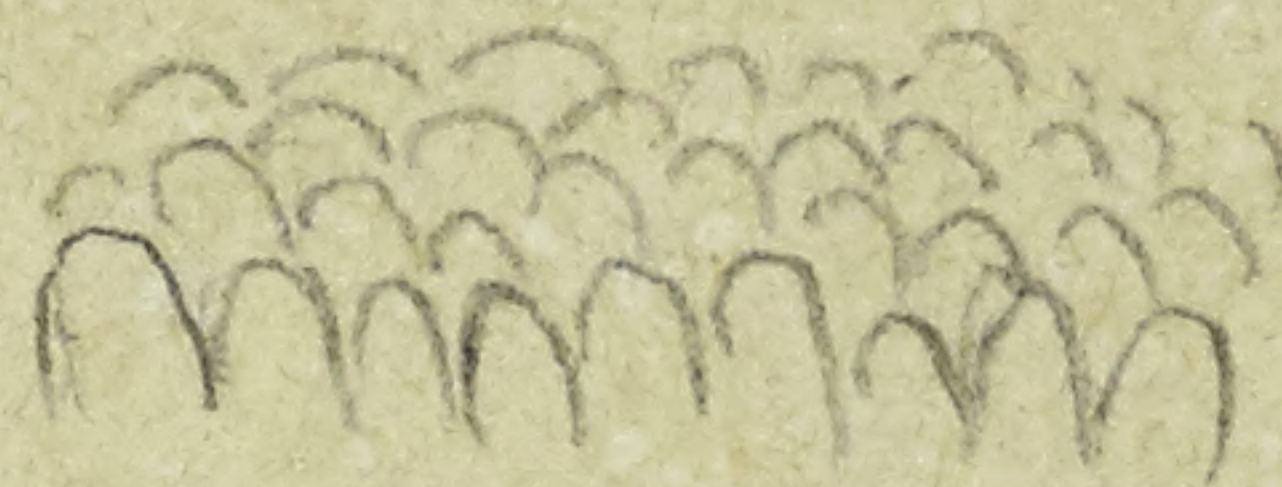
x 10



sect



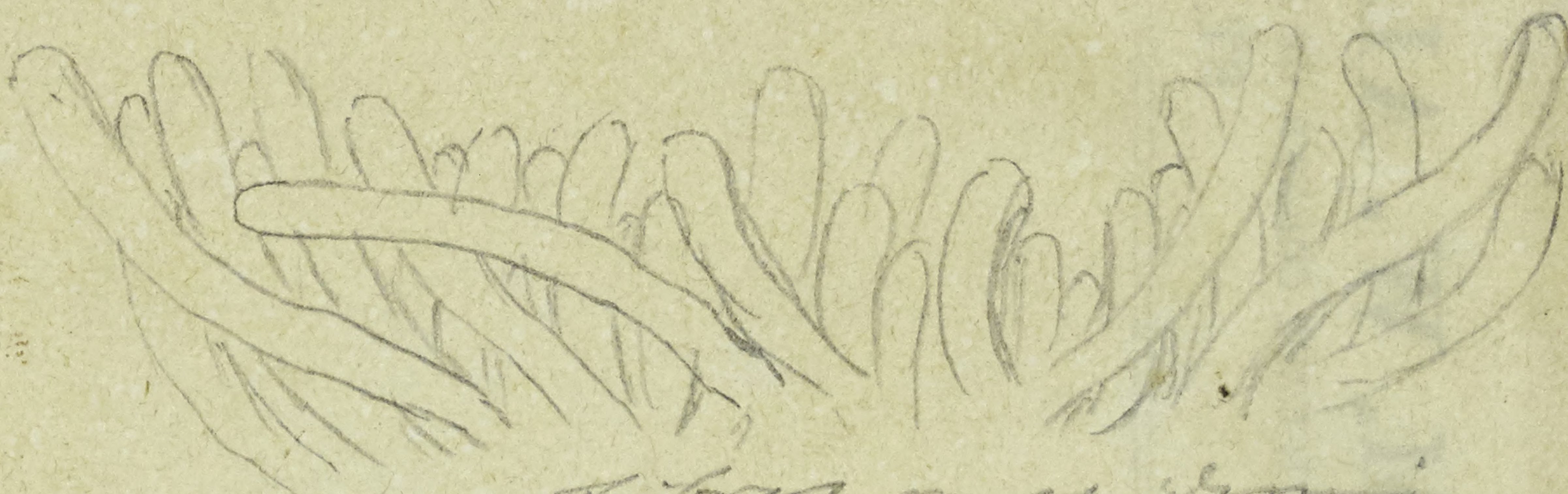
x 280



viewed from
above



sect. of epidermis on different parts of
young seed



Fibres on epidermis
of seed



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x60

N 18. *Op. glaucophylla*

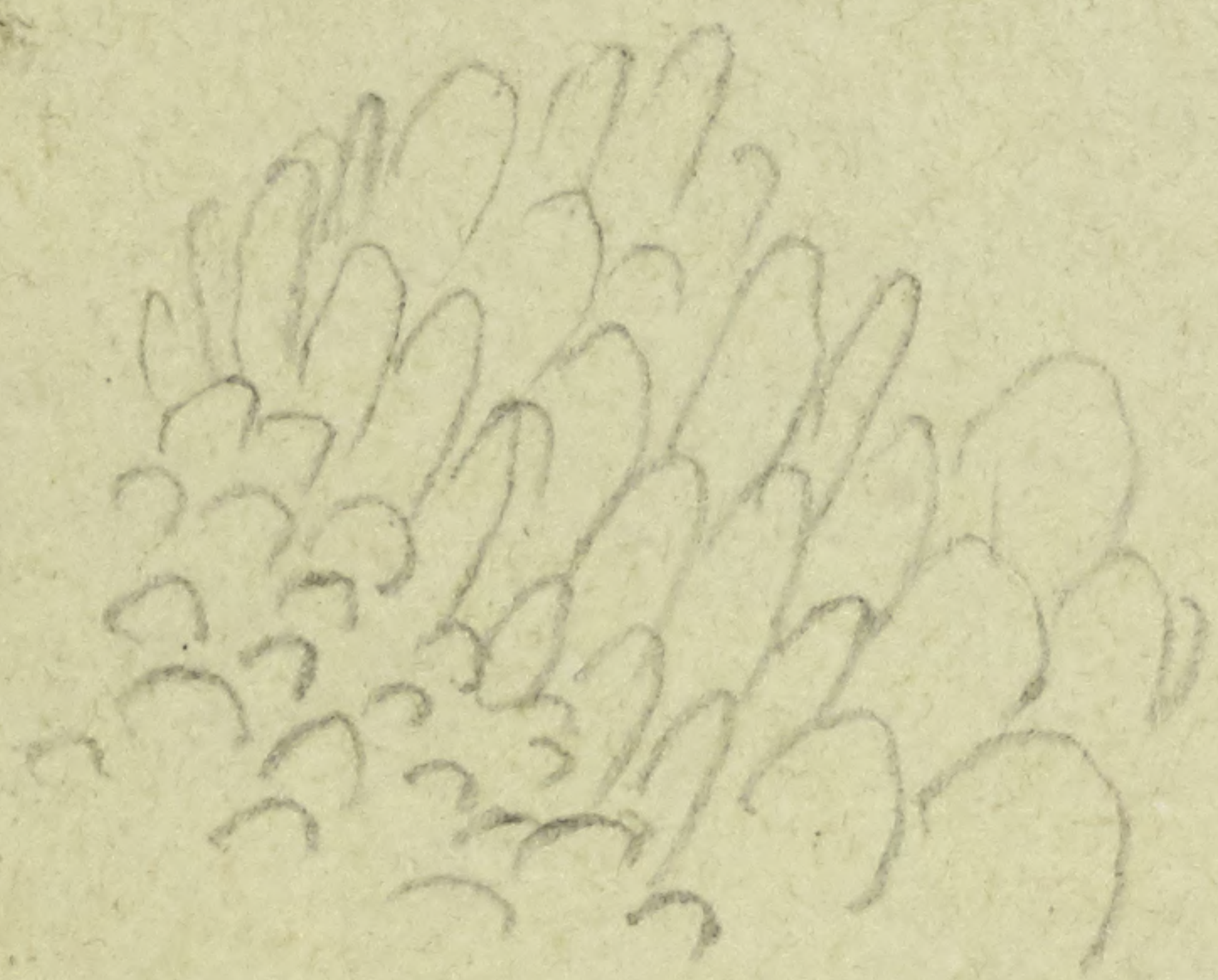
Oct 6 1864

Hort Col Mission

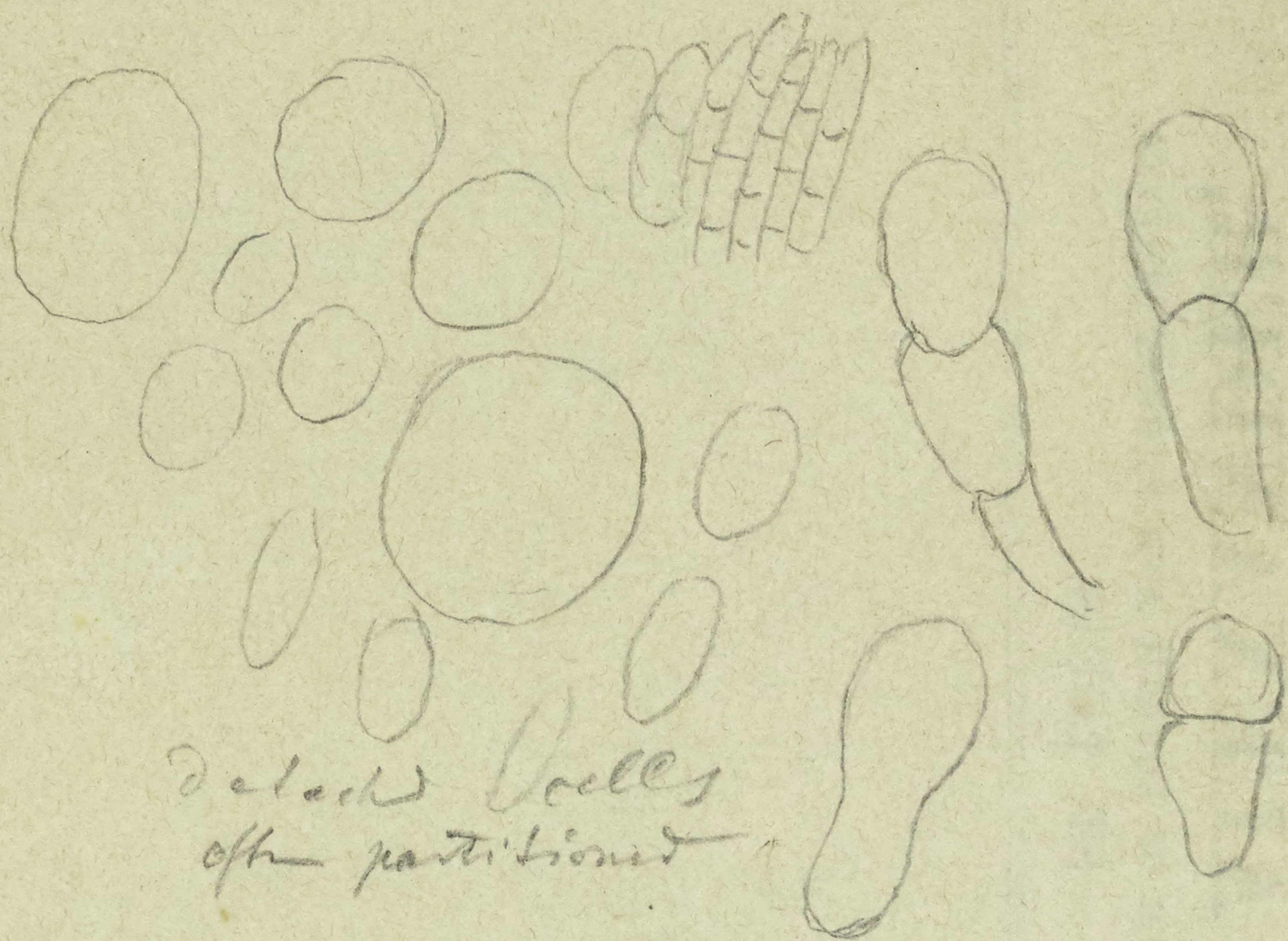
coating of unripe seed, very glutinous



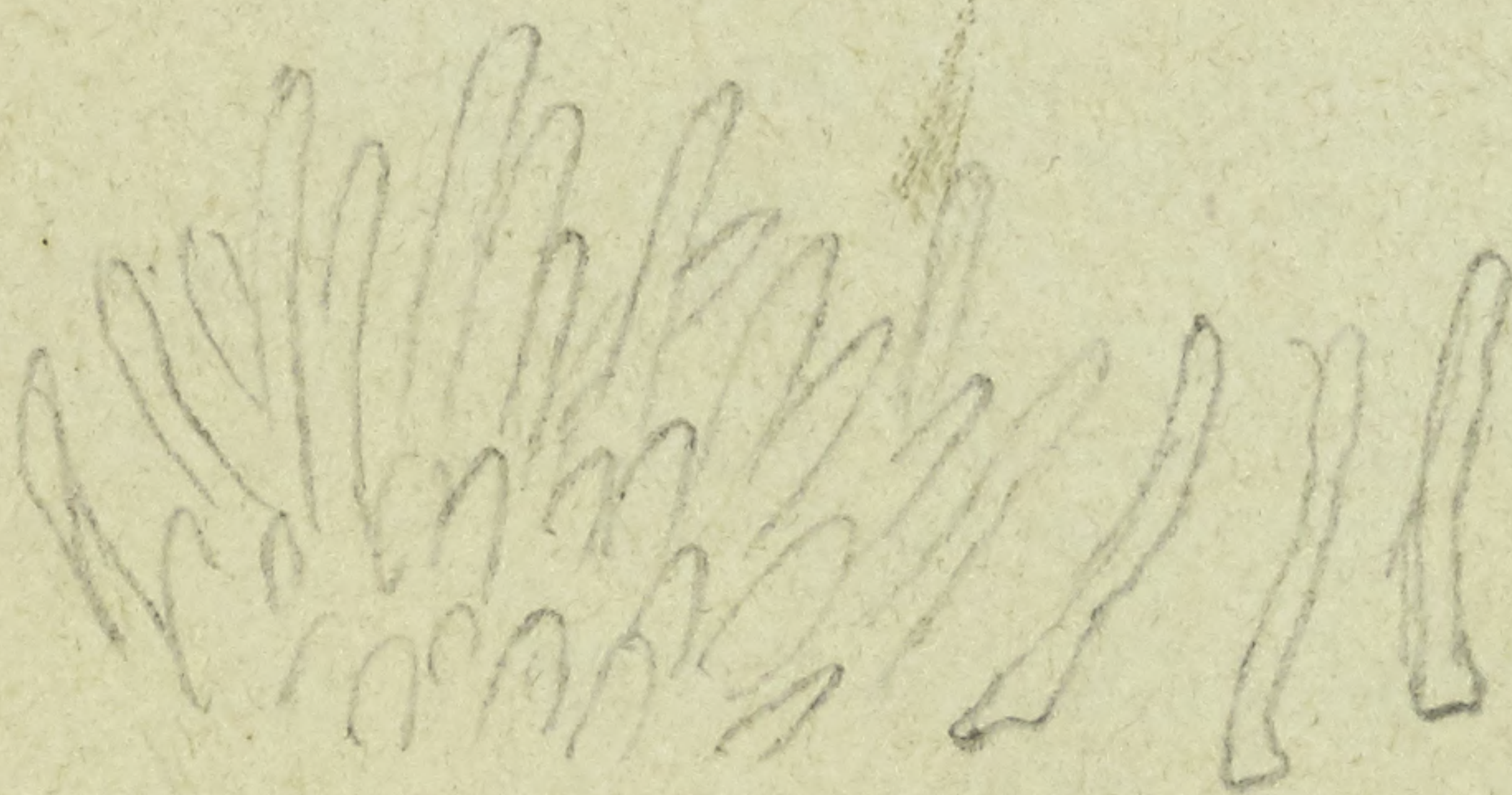
cells covering nearly ripe seed
transparent, containing mucilage



cells covering unripe seed



Detached cells
often partitioned



no partition of cells seen

juv. cells also
is mucilaginous
enlarges but is
distinguished from
the mucous cells of
the seed coat by
the abundance of
crystalline masses (and
spiral vessels)



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Opuntia Rafinesquii

April 15. 1862

fruit exposed during the whole winter
on the plant, not yet fallen off.



x10



pulp insipid
very mucilaginous
only on rim of seed



cells on seed x30

funiculus with
pellucid colorless
cells

x30



parenchyma of fruit
green, slightly reddish
bundles of fibres
stellate crystals
with sparing



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GEORGE ENGELMANN PAPERS



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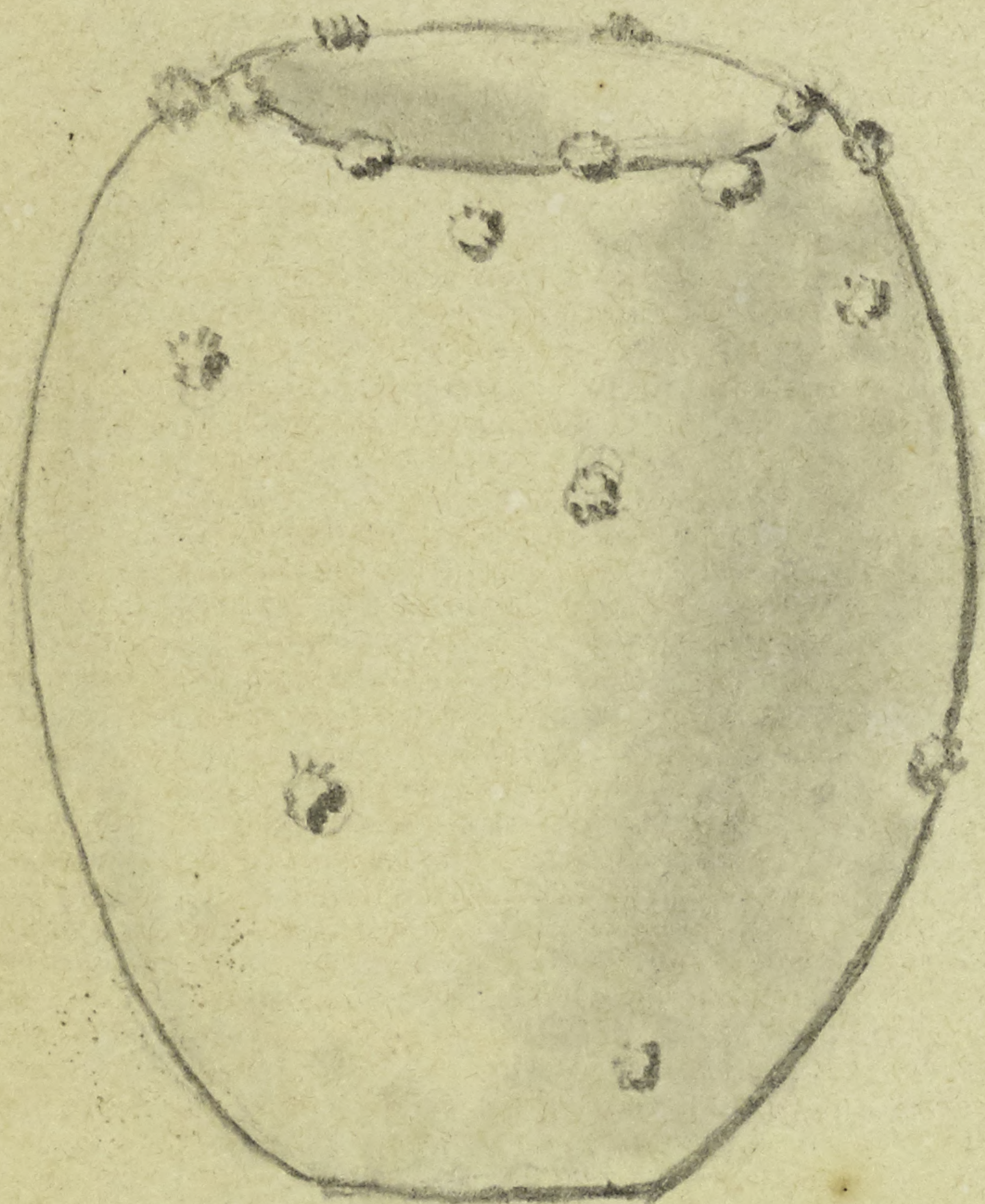


MISSOURI
BOTANICAL
GARDEN

Opuntia Engelmannii

Sept 25 1861

Hort Bot Missouri



lucida, barba lavis non tuberculata
atropurpurea, interior
siccata (nec minime
glebiosa) purpurea
poly sperm - insipida
nec amida

17 areolae on frt
7 on edge

24



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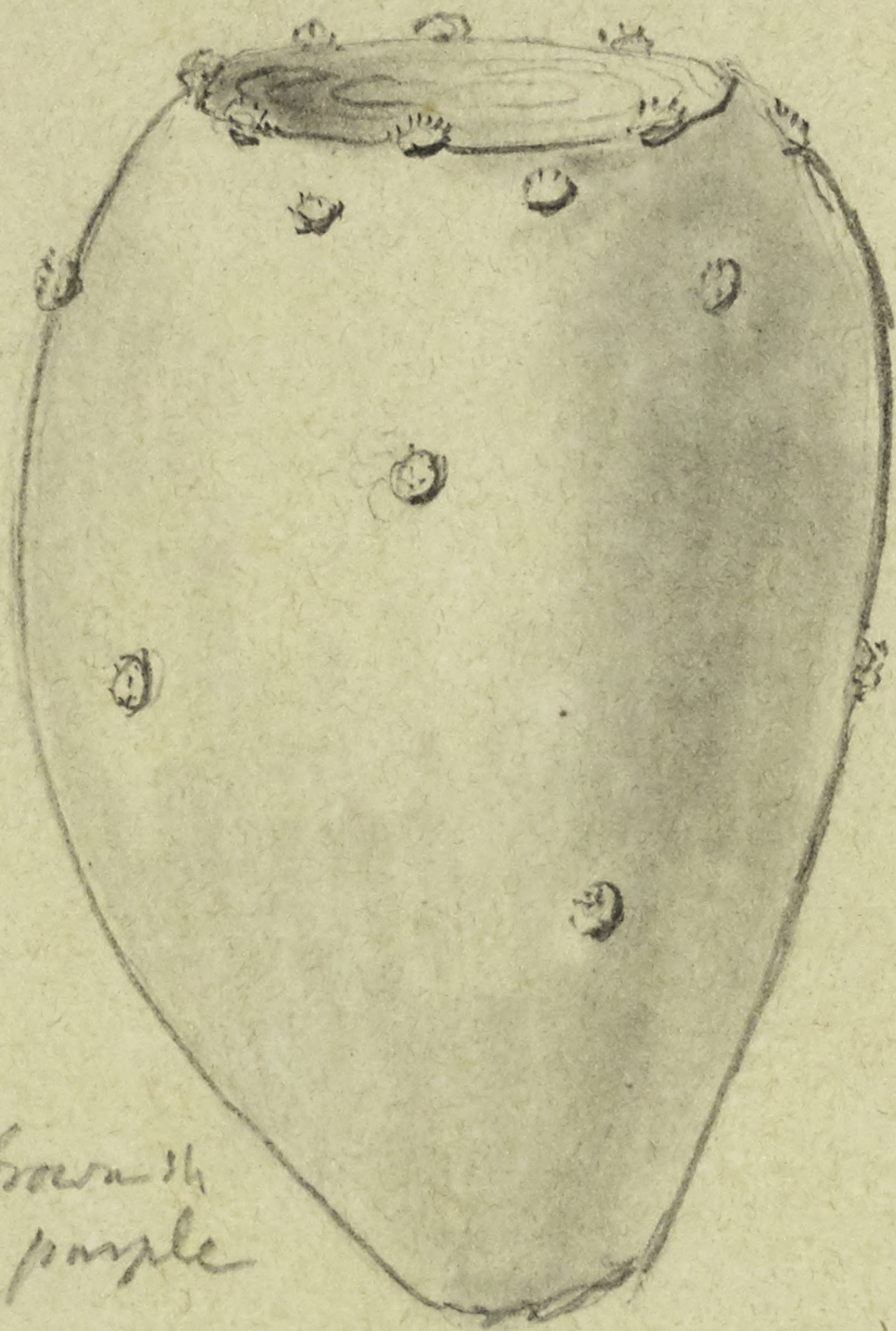
Opuntia Engelmanni ?

Octob 1861

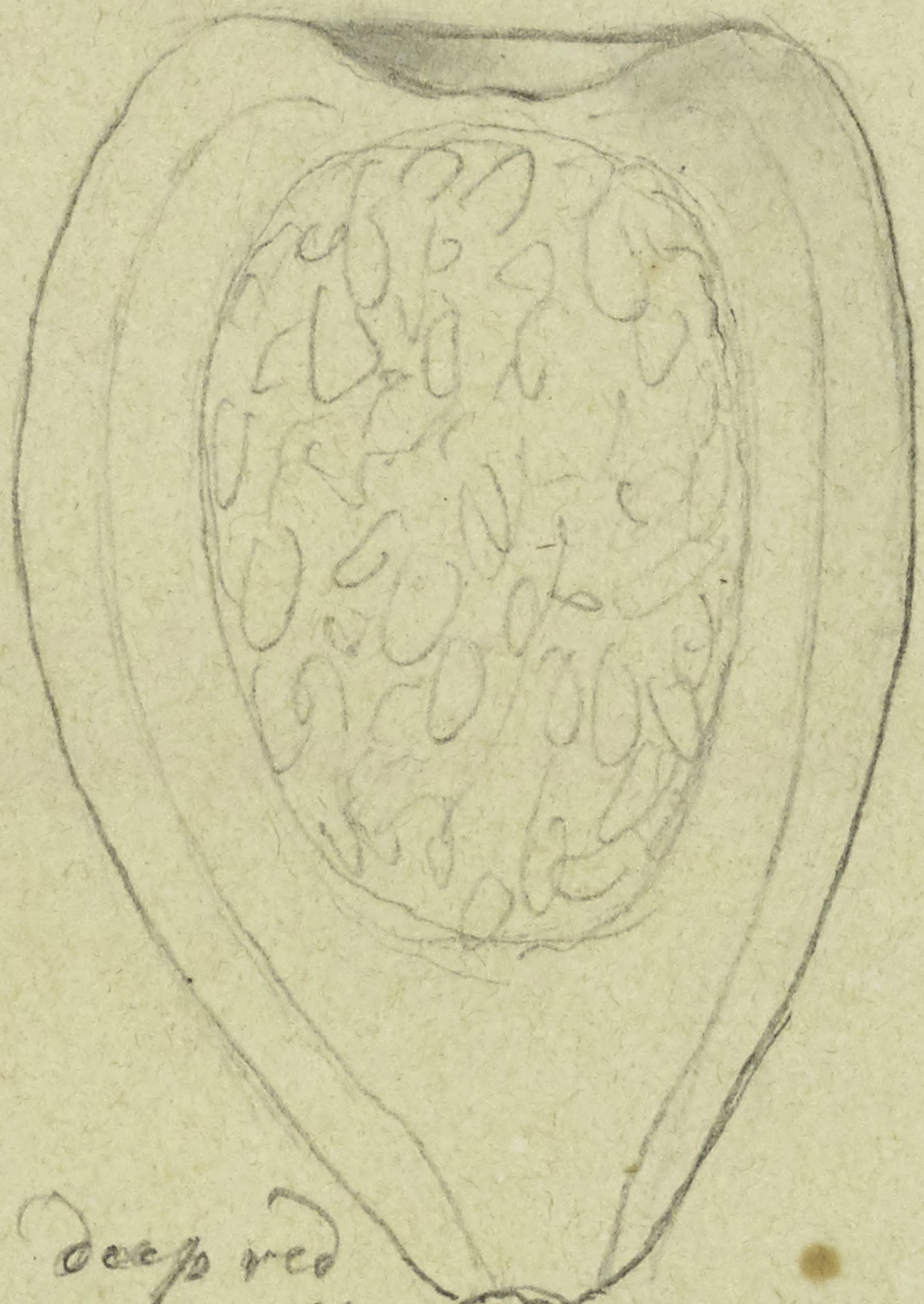
no 97. Hort bot Missouri.

see descr. of flower & plant.

15 on fruit
11 on or near
edge
26 areoles



deep brownish
purple



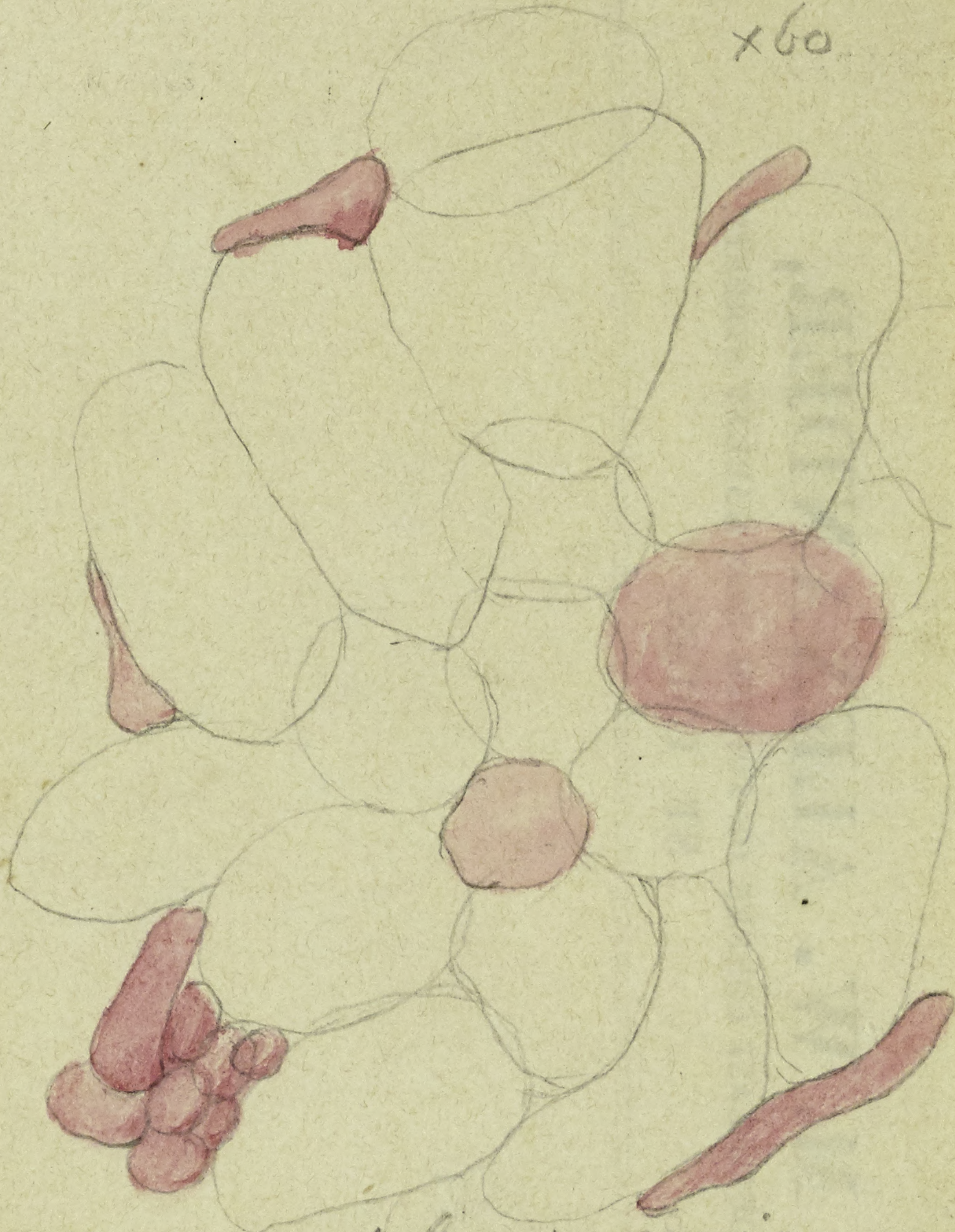
deep red
especially the pulp
about the seeds
juicy but not glutinous
flesh acid

x60



paracanthium of fruit, few cells red
others transparent, many druses of crystals. Large &

x60



pulp in ovarian
cavity, very large
transparent cells, fewer
smaller red ones



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GEORGE ENGELMANN PAPERS



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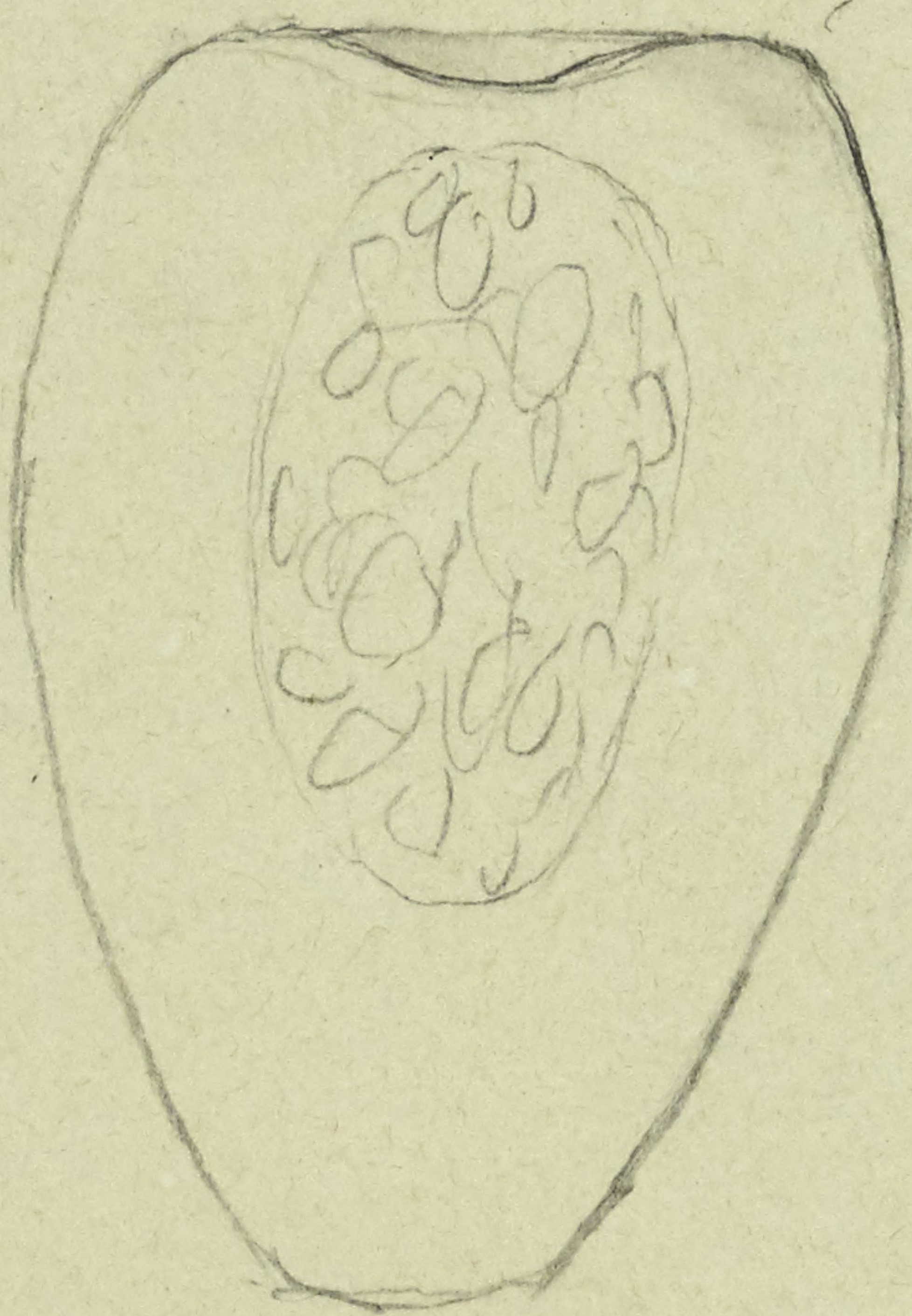
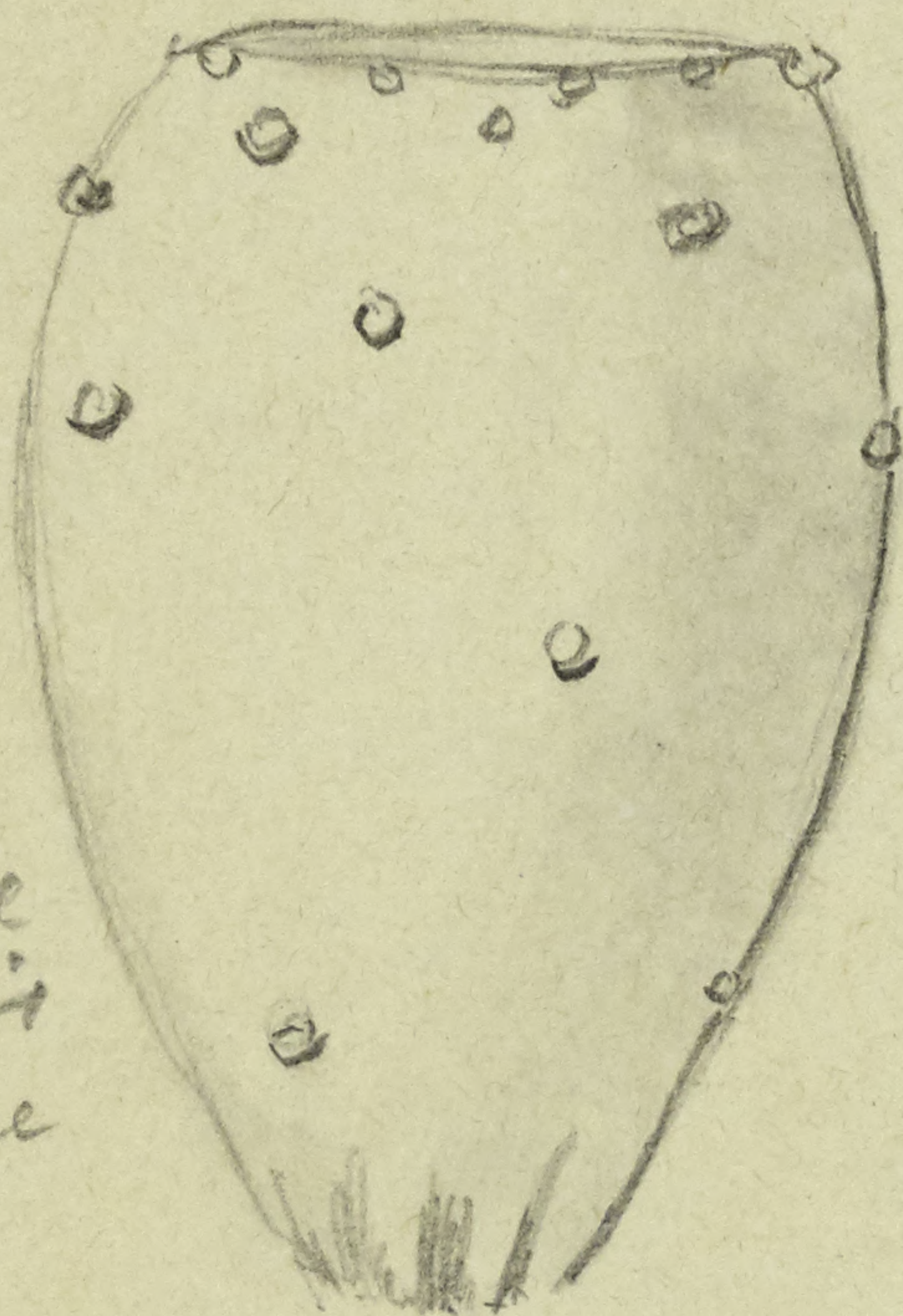
MISSOURI
BOTANICAL
GARDEN

Octob 1861

Opuntia Engelmanni
from Eagle Pass

in Herb. Bot. Missouri.
see descr. of Plant.

18 anal
8 edge
25



19...
8
27



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cm

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GEORGE ENGELMANN PAPERS



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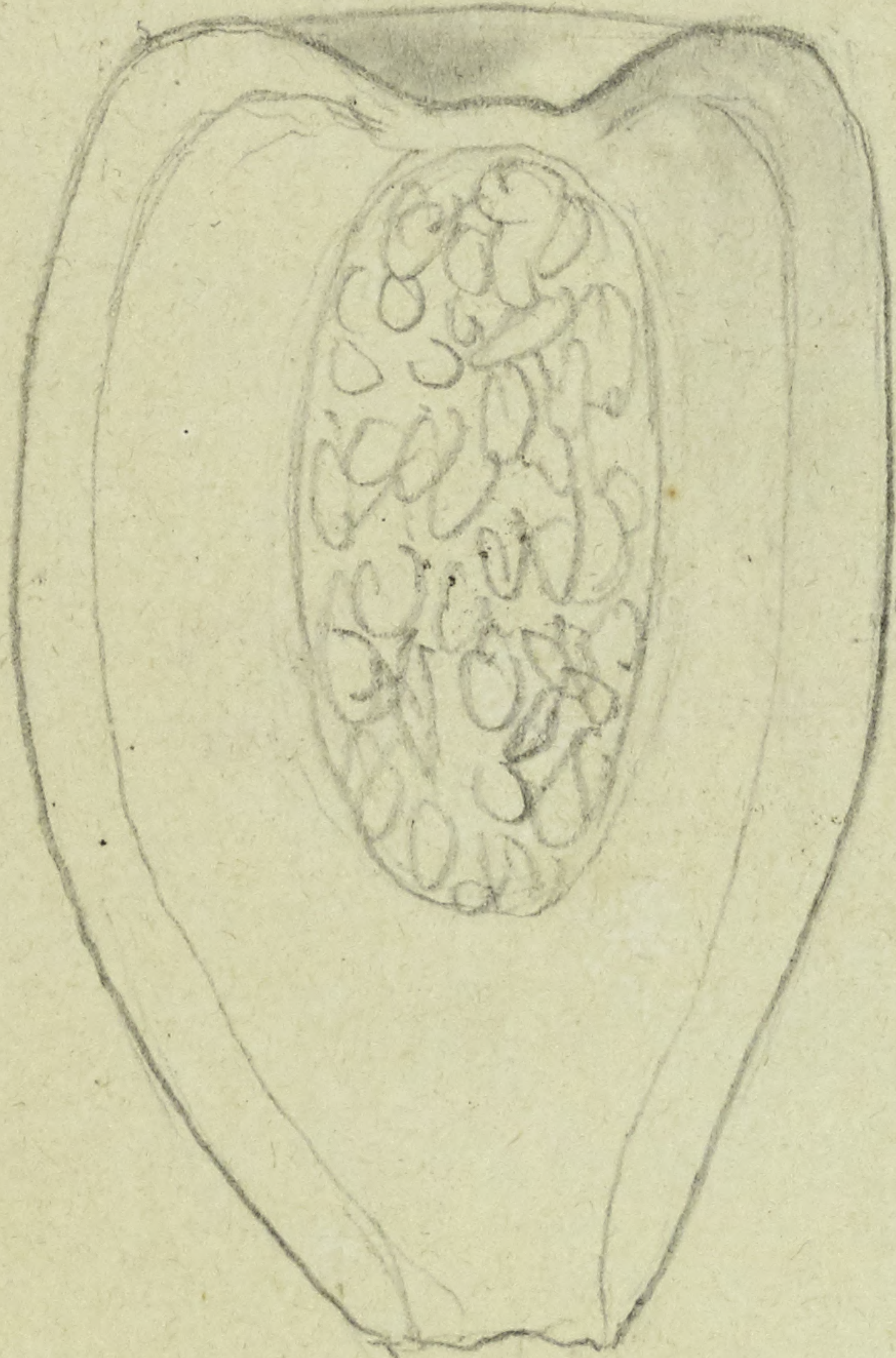
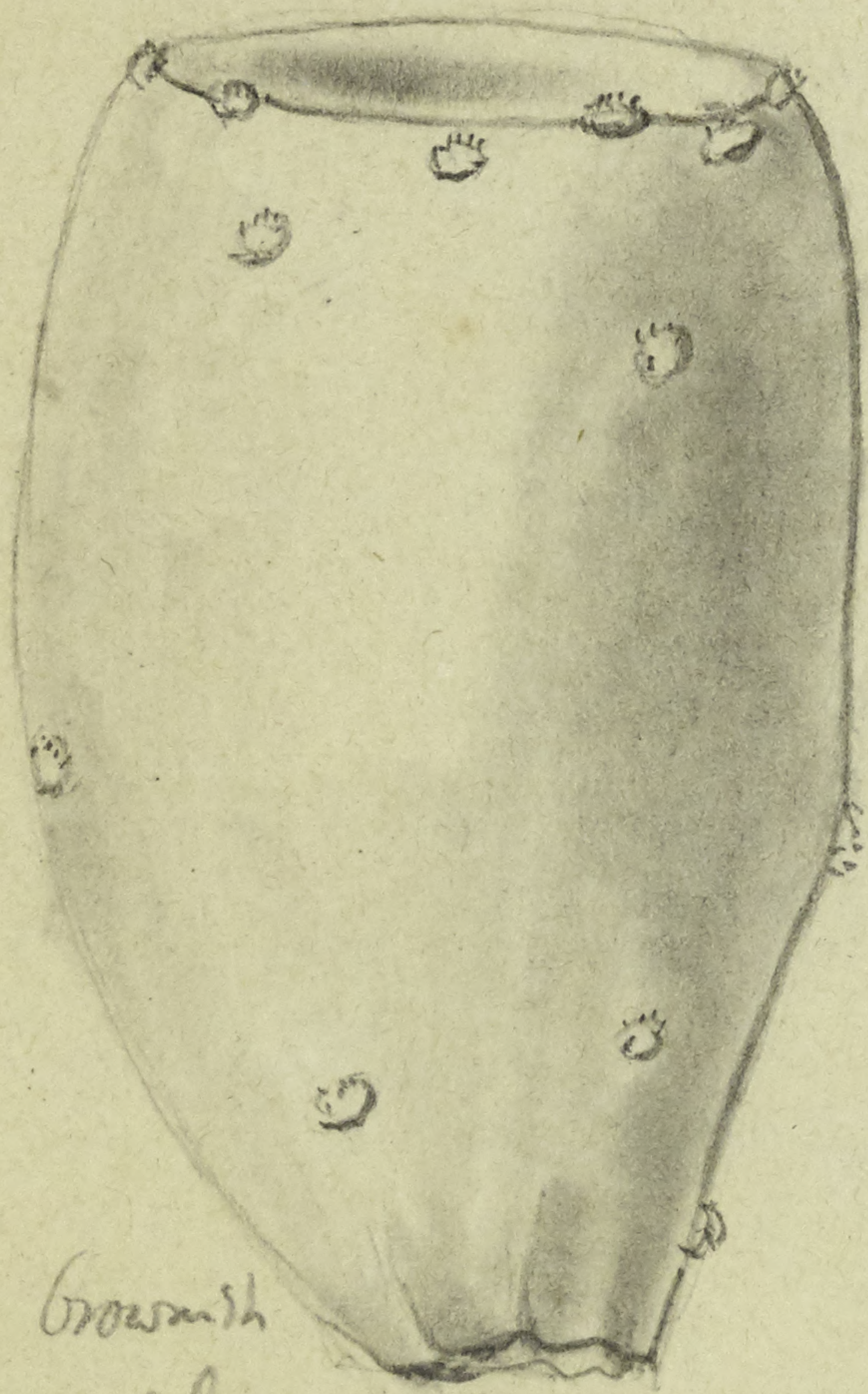
Oct. 1861

Opuntia Engelmanni

"El Paso"

2nd descr. of Plant.

Herb. bot. Missouri.



Deep brownish
purple

17 ribs on fruit

8 — on edge

25



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GEORGE ENGELMANN PAPERS



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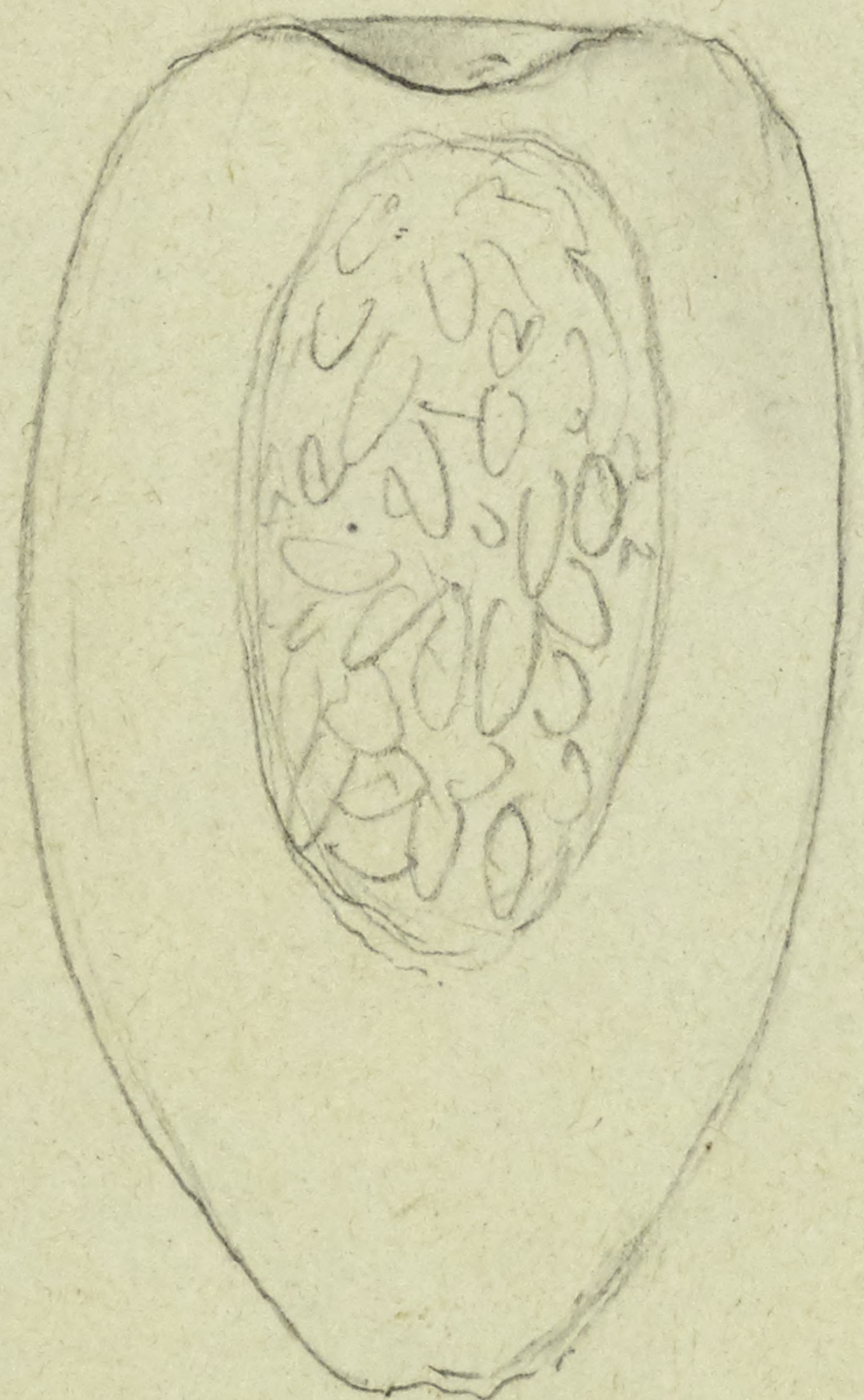
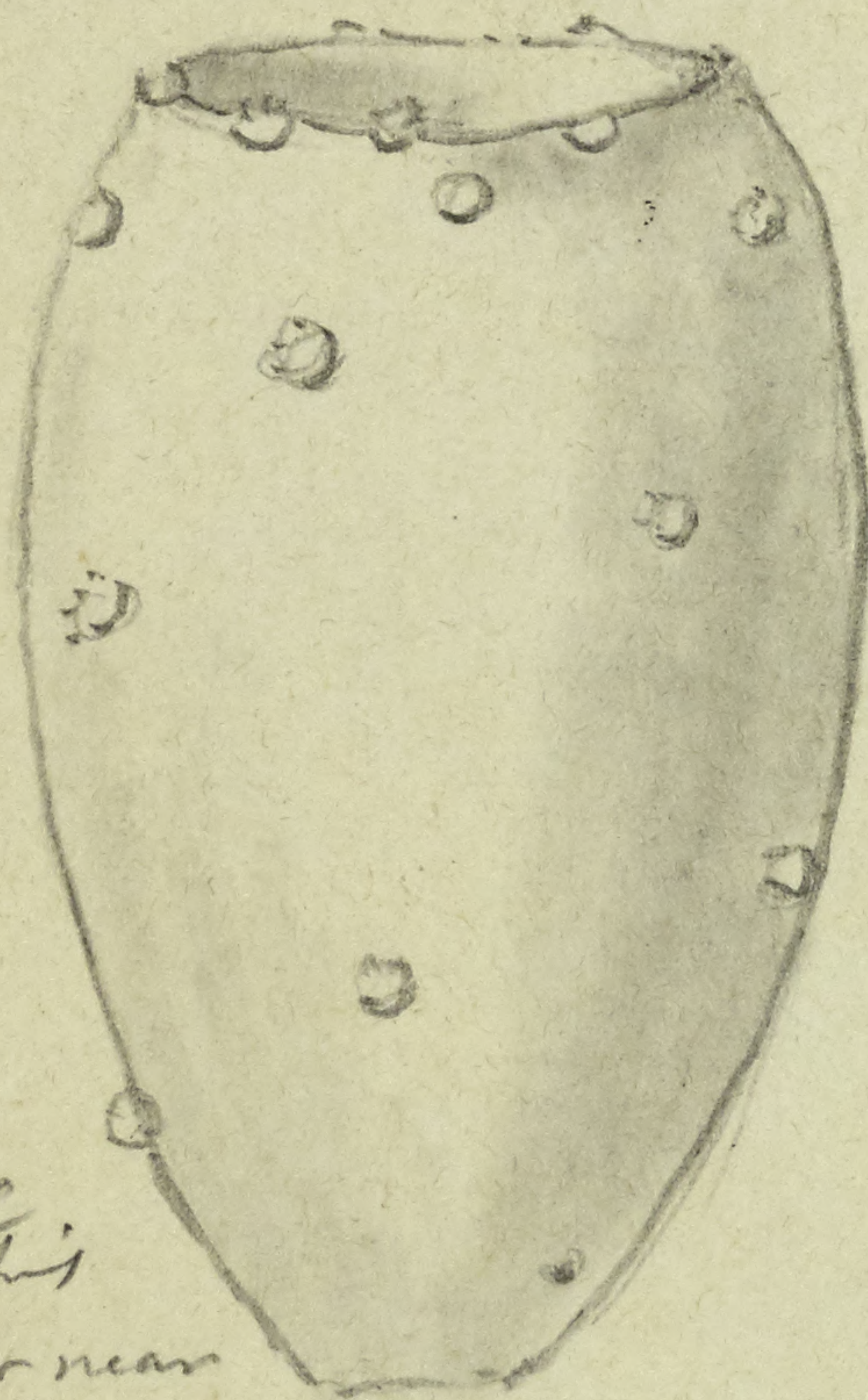


MISSOURI
BOTANICAL
GARDEN

Octob 1861

Opuntia Engelmanni
Hort bot Missouri

(Label: *Tuna*
monantha
Engelmann?)



17 areol.
on frs
9 at or near
edge

26



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cm

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cm

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MISSOURI
BOTANICAL
GARDEN

Opuntia tomentosa
H.B. Merriam

July 2^d 1865
x 12th —



petals purple
anthers yellow
filaments greenish yellow
style purple
6-7 erect thick stigmas

ovary with 40-50 areol
6 x 10 ribs prominent $\frac{6}{16}$ arranged



0 1 2 3 4 5 6 7 8 9 10

cm

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GEORGE ENGELMANN PAPERS



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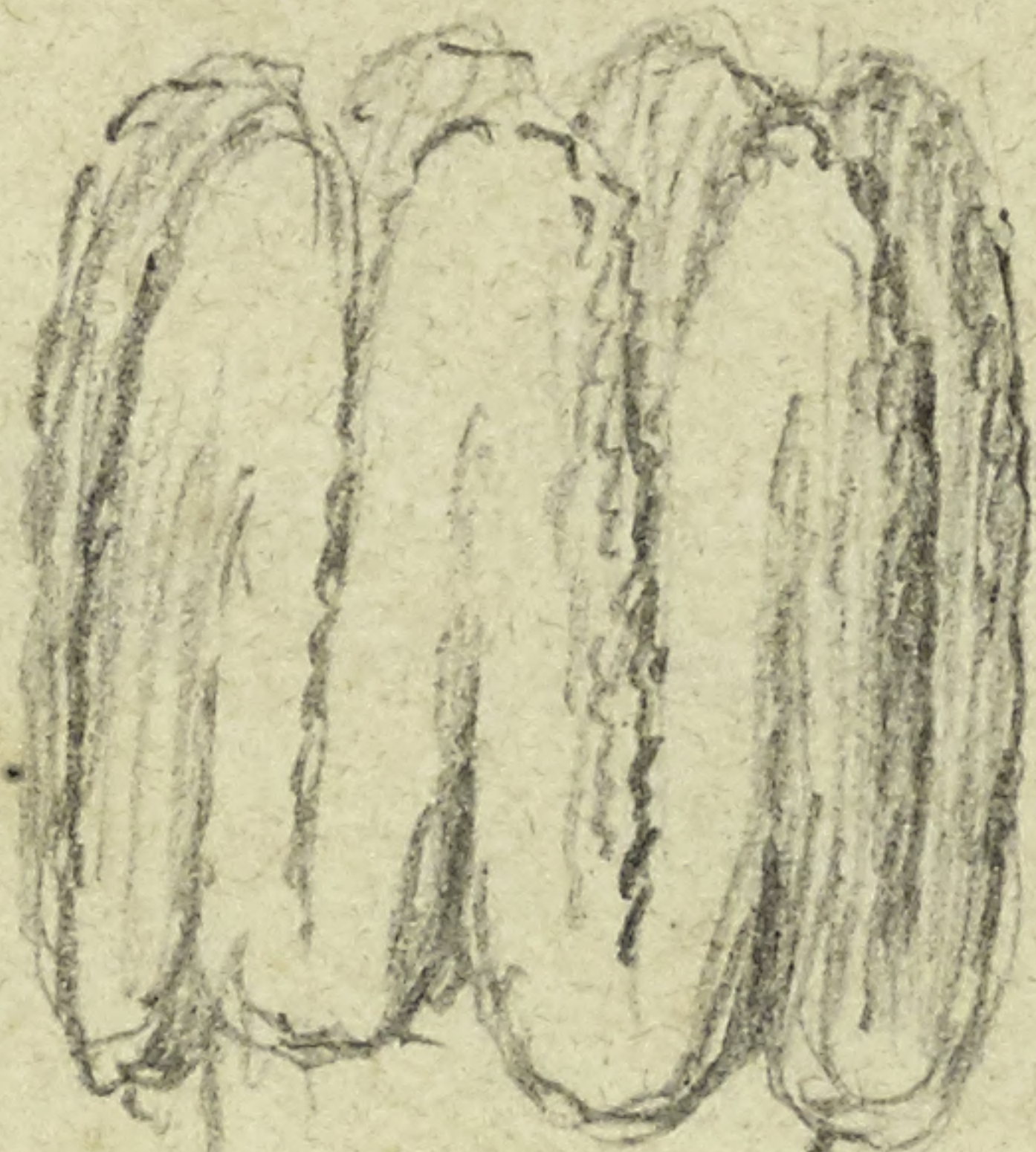


MISSOURI
BOTANICAL
GARDEN

Opuntia tomentosa

July 6 1865

Hb. M. S. W.



x4

Diameter of soaked pollen x415

$$\frac{28 \times 29}{415} = 0.067 - 0.070 \text{ lin}$$

globular



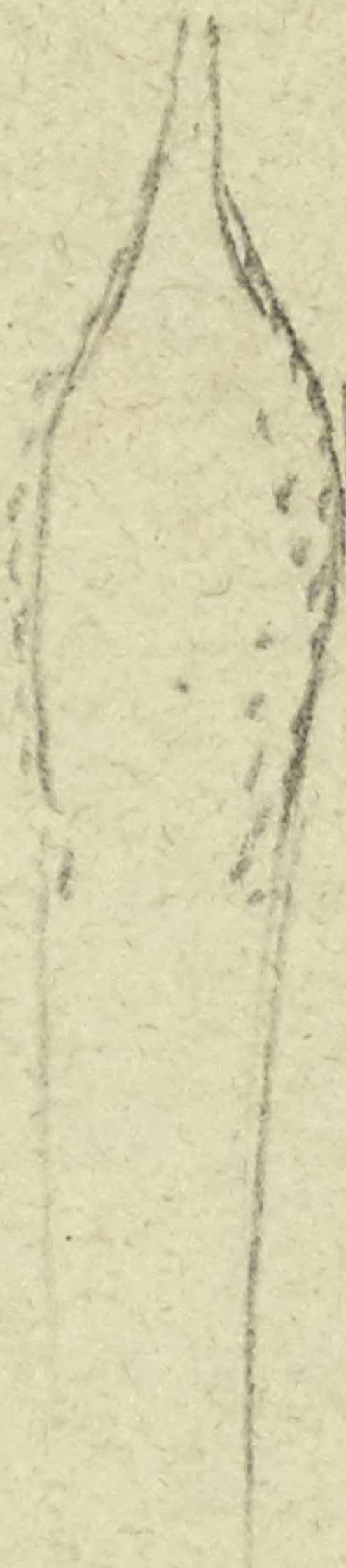
0.050 lin

most pollen grains
of this size & appearance
(incomplete?)



x10

anther
and
filament
vesicular
rough



13 sepals

(green part
pubescent)

9 purple

petals

5-7 erect

flesh colored, soon yellow

at 2 stigmas

on purple style

(for pollen)



0 1 2 3 4 5 6 7 8 9 10

cm

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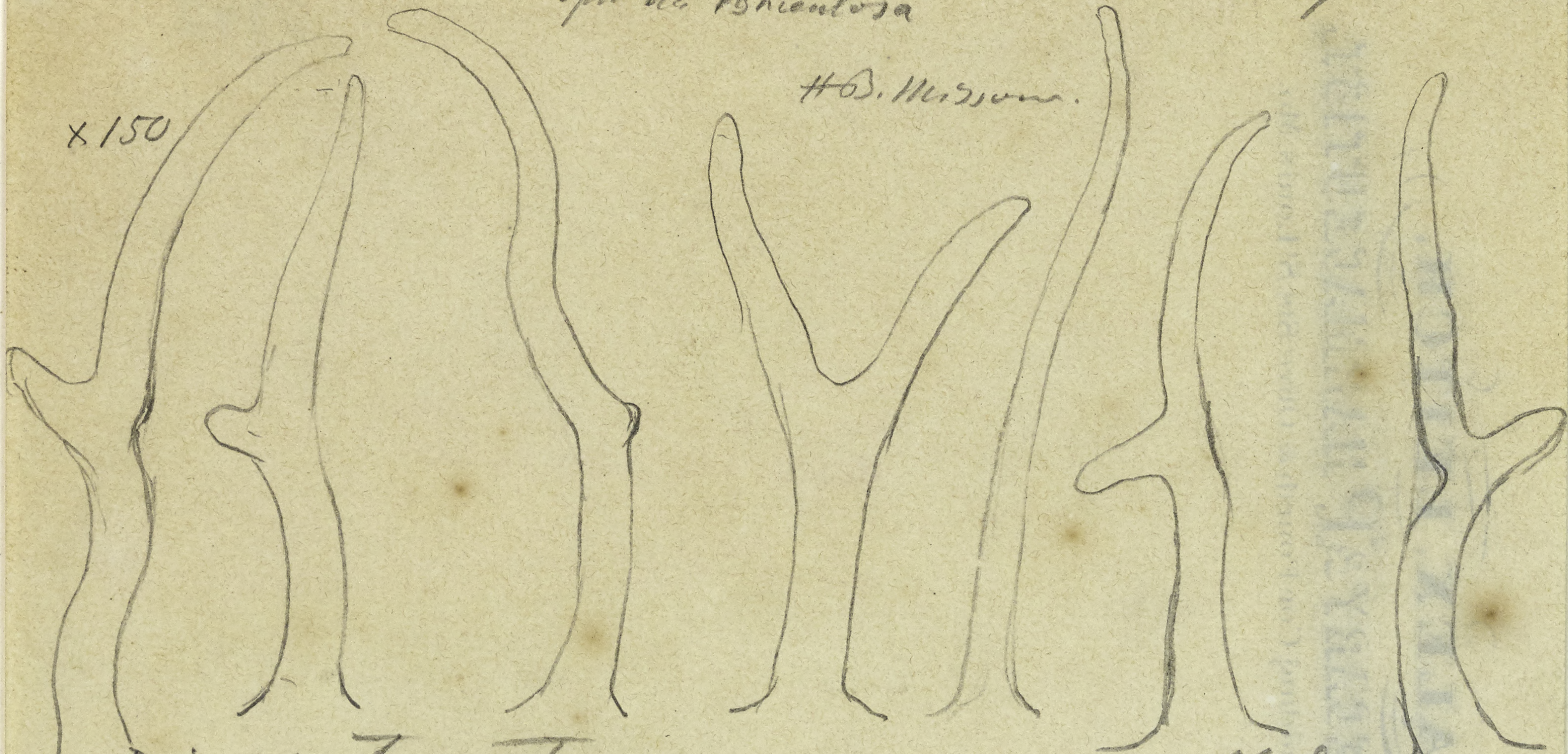
MISSOURI
BOTANICAL
GARDEN

Opuntia tomentosa

July 2^d 1865

H.B. Missour.

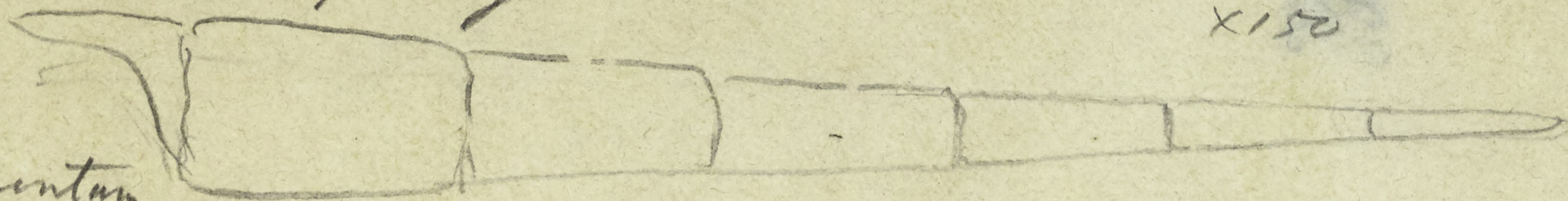
x 150



Hairs of *Tomentum* on ovary - 1 celled,
rarely single, sometimes forked, usually with
a short lateral prong.

x 150

hair of *tomentum*
of areola



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GARDEN

Opuntia elata

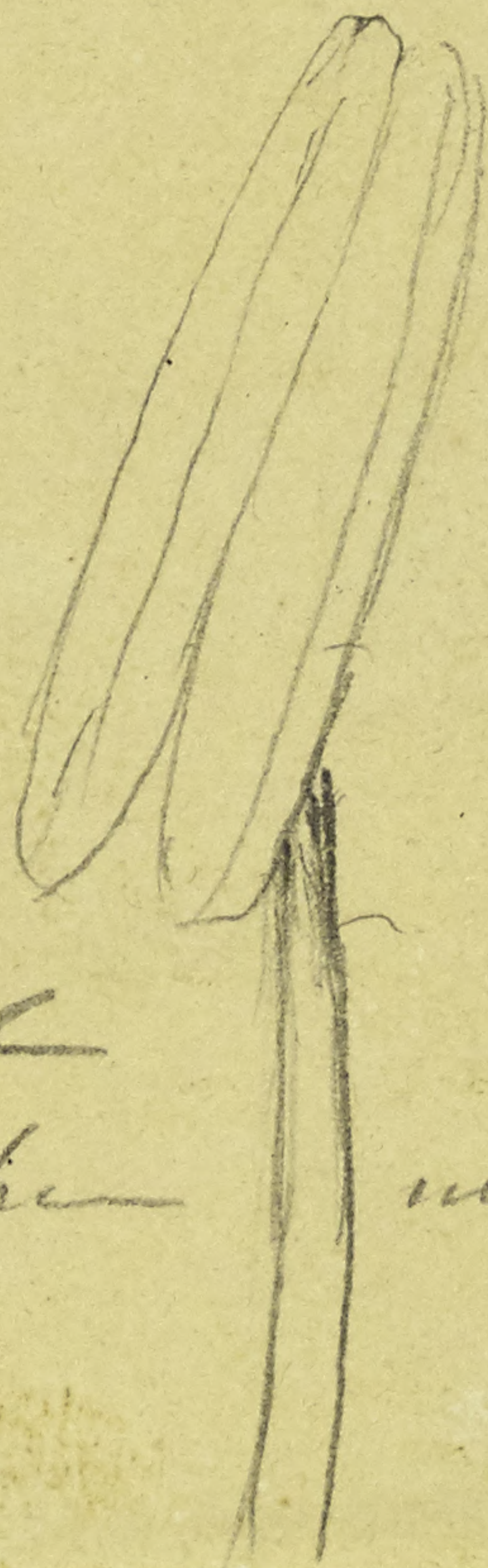
July 12 1868

X30



Diam of Pollen $\times 415$ soaked.
all grains somewhat irregularly
angular — perfect?
usually 0.052-54, largest 0.060

X10



anther & filament
slightly rough, when
filament filiform

magnified



0 1 2 3 4 5 6 7 8 9 10

cm

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GEORGE ENGELMANN PAPERS

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Opuntia elata

July 12 1865



petals yellow-
orange
verging to
copper

13-15 areoles on ovary - with sepals $1\frac{1}{2}$ lines long.
white tomentum and very short bristles (reddish)



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cm

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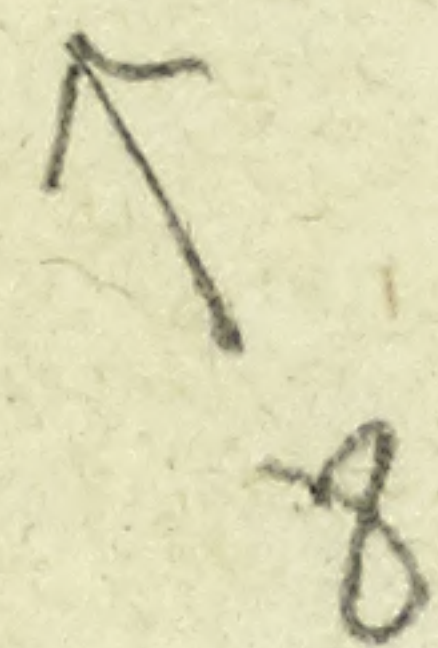
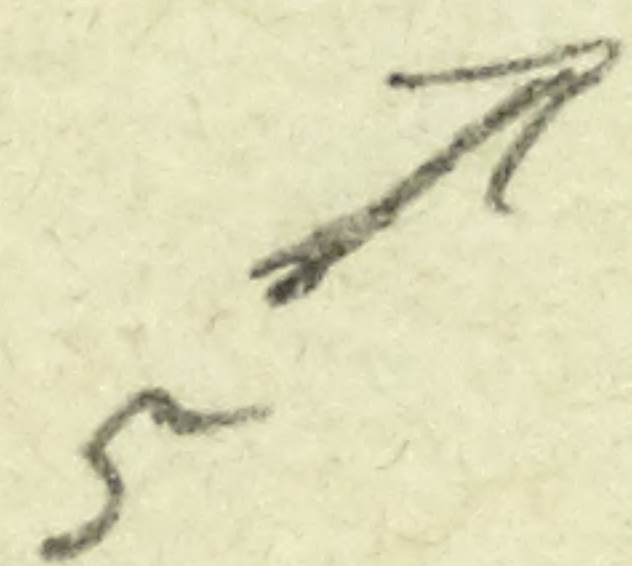
Op. Secemana

June 1 1872
ex Hort. Paris Jan 1868

fruit orange

in HB Herbarium May 1872

why not = O. Friesii?



$\frac{5}{13}$

about 50
areoles on



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MISSOURI
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2945

Leitch & Corlies

DRUGGISTS

South-west
Corner Fifth
and Market
Streets

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